Analyzing Employee Turnover and Retention

Table of Contents

1. Introduction 4
2. Literature overview 7
3. Research Objective… 9
4. Hypothesis 9
5. Data analysis 10
6. Data preprocessing 17
7. Result 18
8. Final Result……..
9. Appendix……
   -Questionnaire used
10. Conclusion……

Introduction

Employee turnover and retention have emerged as critical challenges for organizations in India, impacting not only recruitment costs but also operational efficiency and workforce morale. High turnover rates can lead to loss of institutional knowledge, increased hiring and training expenses, and decreased productivity. Conversely, strong employee retention contributes to organizational growth, employee satisfaction, and a positive work culture.

In India, recent surveys highlight that the average employee turnover rate in 2023 across industries is around 20%. The IT sector, in particular, has faced significant challenges, with an attrition rate of 25.2%, as reported by NASSCOM. The retail and hospitality sectors also report higher turnover rates, nearing 30%, while sectors like healthcare and manufacturing see lower rates, between 12% and 15%. According to a report by Deloitte, companies in India are increasingly focusing on retention strategies as voluntary turnover is estimated to cost Indian businesses over ₹30,000 crore annually.

This project seeks to analyze key drivers of employee turnover in India and propose data-driven strategies to enhance retention rates. By leveraging HR analytics, the study aims to identify turnover trends, predict risks, and offer actionable insights for improving employee retention.

Employee Turnover refers to the rate at which employees leave an organization and are replaced by new hires over a certain period of time. It includes both voluntary turnover, where employees choose to leave (e.g., resignations), and involuntary turnover, where employees are let go (e.g., layoffs, terminations). High turnover rates can indicate dissatisfaction, lack of engagement, or poor organizational practices, and it often results in increased recruitment costs, reduced productivity, and loss of experienced personnel.

Employee Retention refers to an organization's ability to retain its employees over time, minimizing the number of employees who leave. High retention rates are generally seen as a sign of a healthy work environment, good employee satisfaction, and effective management practices. Retaining employees helps maintain productivity, reduce recruitment and training costs, and foster a stable organizational culture. Retention strategies focus on improving employee satisfaction, offering career development, and creating a supportive work environment.

10 Factors Responsible for Employee Turnover and Retention:

1. **Job Satisfaction** – Employees who feel fulfilled in their roles are more likely to stay, while dissatisfaction can lead to turnover.
2. **Work-Life Balance** – A lack of balance can result in burnout and increased turnover, while good balance boosts retention.
3. **Career Growth Opportunities** – Limited opportunities for advancement often push employees to leave, while growth potential encourages them to stay.
4. **Compensation and Benefits** – Competitive pay and benefits attract and retain employees, while inadequate compensation leads to turnover.
5. **Work Environment** – A positive, inclusive, and supportive workplace promotes retention, while toxic environments cause turnover.
6. **Management Style** – Poor leadership and micromanagement increase turnover, while effective, supportive managers improve retention.
7. **Recognition and Rewards** – Lack of recognition for work can demotivate employees, leading to turnover, while regular recognition fosters loyalty.
8. **Job Security** – Perceived instability or frequent layoffs lead to higher turnover, whereas a secure environment improves retention.
9. **Training and Development** – Offering development opportunities retains employees, while lack of training causes turnover due to stagnation.
10. **Company Culture** – Misalignment with the company's values or culture increases turnover, while a good cultural fit boosts retention.

10 Impacts of Employee Turnover and Retention on an Organization:

1. **Recruitment Costs** – High turnover increases costs associated with hiring new staff, while high retention reduces these expenses.
2. **Training and Onboarding Costs** – Frequent turnover requires ongoing training for new employees, increasing costs, while retention minimizes this need.
3. **Productivity Loss** – High turnover can lead to disruptions and a loss of productivity, while retention maintains continuity and output.
4. **Morale and Engagement** – Turnover can lower team morale and engagement, while retention helps maintain a motivated workforce.
5. **Institutional Knowledge Loss** – Turnover leads to a loss of experienced

employees and organizational knowledge, while retention preserves expertise.

6. **Workplace Culture** – High turnover can destabilize culture, creating uncertainty, while high retention fosters a stable, positive environment.
7. **Customer Satisfaction** – Frequent turnover may affect service quality and customer relationships, while retention ensures consistency in customer service.
8. **Employee Collaboration** – Turnover disrupts team dynamics and collaboration, while retention strengthens teamwork and cohesion.
9. **Reputation** – High turnover can damage an organization’s reputation, making it harder to attract talent, while strong retention enhances the organization's image.
10. **Financial Performance** – Excessive turnover increases operational costs and affects profitability, while high retention contributes to better financial outcomes through improved efficiency and performance.

Literature overview

Employee turnover and retention have been extensively studied in human resource management and organizational behavior literature, focusing on understanding the causes, consequences, and strategies to mitigate turnover while improving retention.

According to Waldman et al. (2004), employee turnover is a significant challenge that impacts organizational efficiency, productivity, and morale. Turnover includes both voluntary exits, where employees resign or seek better opportunities, and involuntary exits, such as layoffs or terminations. Research suggests that voluntary turnover is driven largely by factors such as job dissatisfaction, lack of career development, and poor management (Hom et al., 1992).

Herzberg's Two-Factor Theory (1959) remains a foundational concept in understanding turnover. Herzberg distinguishes between hygiene factors (e.g., salary, working conditions) and motivators (e.g., recognition, responsibility). The absence of hygiene factors often leads to dissatisfaction and turnover, while the presence of motivators increases job satisfaction and retention.

Recent studies emphasize the importance of work-life balance and flexible work arrangements in influencing employee retention. Cascio (2006) highlights that organizations offering remote work, flexible hours, and family-friendly policies experience lower turnover rates. Similarly, research by Bloom et al. (2015) found that companies offering such benefits reduce burnout and improve retention.

Job satisfaction is one of the strongest predictors of retention, as demonstrated by Meyer and Allen's (1991) three-component model of organizational commitment, which links emotional attachment, perceived job stability, and moral obligation to an employee's decision to stay.

In India, studies have shown a significant rise in employee turnover rates, particularly in industries like IT and retail. NASSCOM (2023) reports that the Indian IT sector has seen an attrition rate of 25.2%, driven by increased opportunities in a booming tech industry. In contrast, sectors like healthcare and manufacturing report lower turnover rates due to more secure, long-term employment prospects (Deloitte, 2022).

Das and Sahoo (2012) explored the role of gender in turnover, finding that male employees often leave organizations in search of higher-paying opportunities, while female employees are more likely to leave due to lack of work-life balance or career

progression challenges. Further, studies such as Busari (2012) note that financial stress and unmet career expectations are significant contributors to turnover among younger employees in Indian companies.

The literature also explores retention strategies, including offering competitive salaries, career development opportunities, and strong organizational culture. Pfeffer (1994) emphasizes that organizations that invest in employee growth through training and development experience higher retention rates. In a study by Allen et al. (2010), companies with well-defined mentorship programs and leadership development opportunities saw reduced turnover rates among high-performing employees.

The impact of turnover on organizations is substantial, leading to increased recruitment and training costs, reduced productivity, and loss of institutional knowledge. Hausknecht et al. (2009) argue that high turnover rates disrupt team dynamics and hinder long-term growth. Conversely, strong retention positively influences organizational culture, productivity, and financial performance (Cascio, 2000).

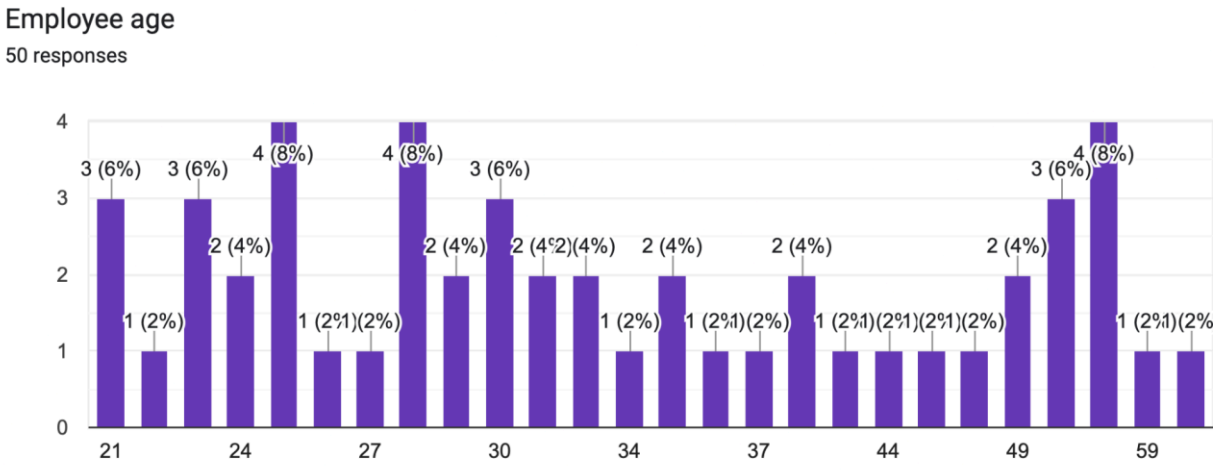
Overall, the literature on employee turnover and retention highlights the importance of addressing key factors like job satisfaction, work-life balance, career growth, and management practices to ensure long-term employee commitment. Emerging research suggests the need for a more data-driven approach, utilizing HR analytics to predict turnover risks and enhance retention strategies through targeted interventions.

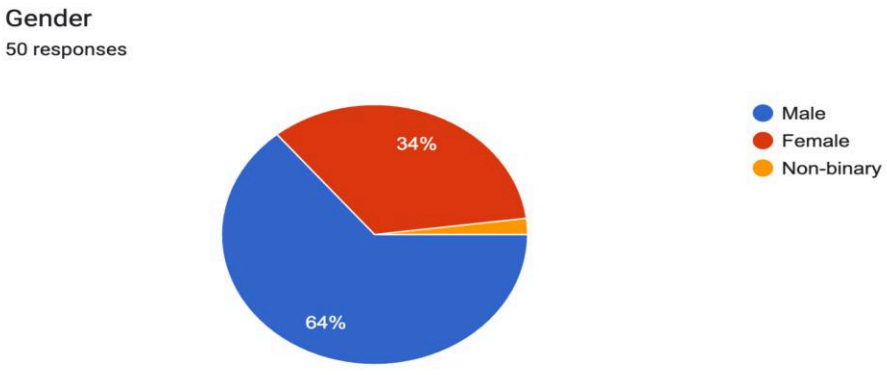
Research Objectives

1. **To examine the relationship between employee demographics** (age, gender, marital status) and turnover rates, identifying trends in retention across different employee groups in Noida.
2. **To assess the impact of department and job role** on employee turnover, analyzing which roles and departments (HR, IT, R&D, Marketing, Sales) have higher turnover rates and why.
3. **To explore the influence of job level and performance rating** on retention, determining if employees in senior roles or with higher performance ratings are more likely to stay longer with the company.
4. **To investigate how work-life balance, job satisfaction, and environmental satisfaction** correlate with employee turnover, and whether poor satisfaction scores lead to higher exit rates.
5. **To analyze the role of compensation and overtime work** in turnover, identifying whether employees with lower monthly incomes or those required to do overtime are more prone to leaving.
6. **To identify the primary reasons for employees leaving** (e.g., better opportunities, better pay, job role mismatch), and develop retention strategies based on these findings.

Data Analysis

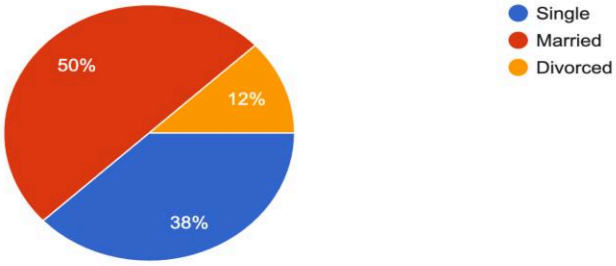
A Google Form was circulated on University group 50 Responses were recorded from corporate workers and a detailed analysis is shown below.





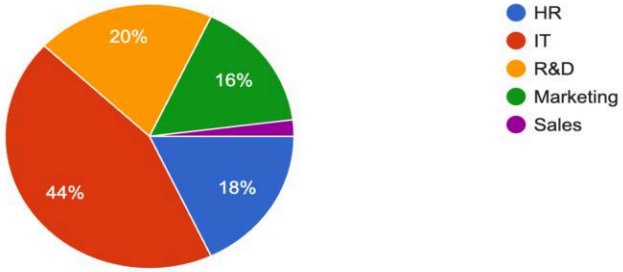
Marital status

50 responses



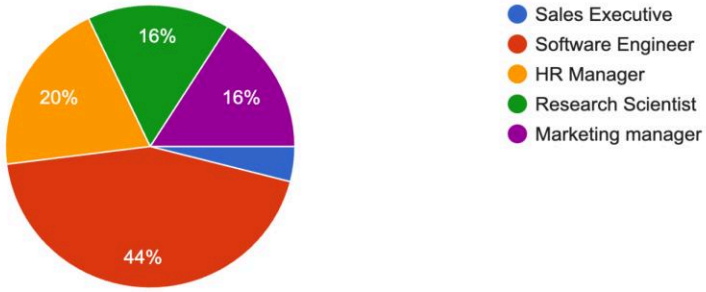
Department

50 responses



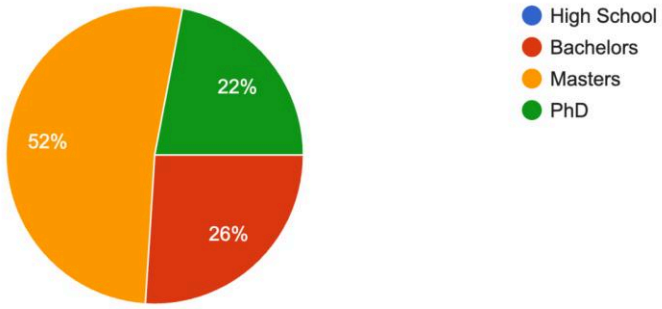
Job roles

50 responses



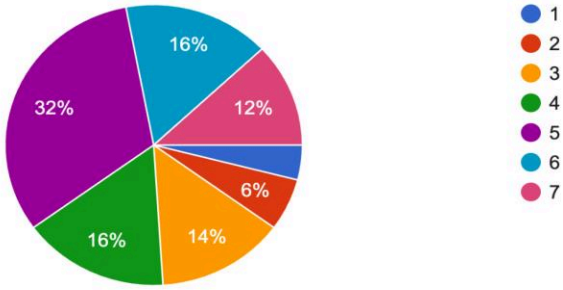
Education

50 responses



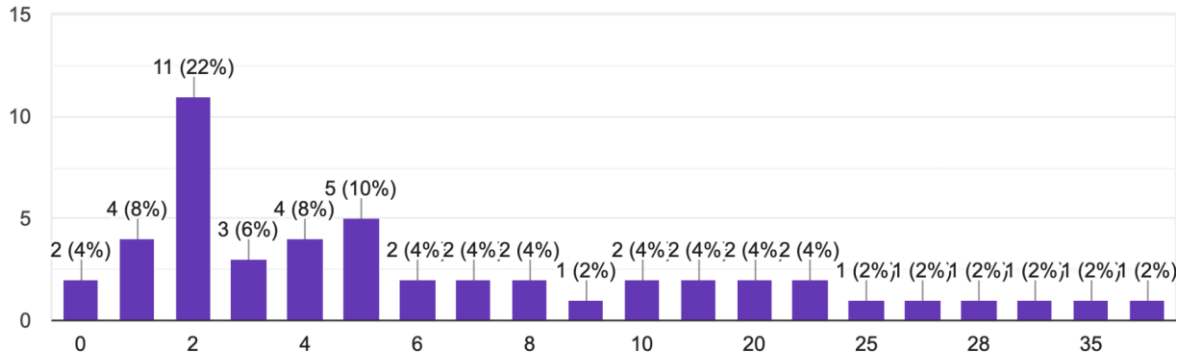
Job level [Scale: 1-7]

50 responses



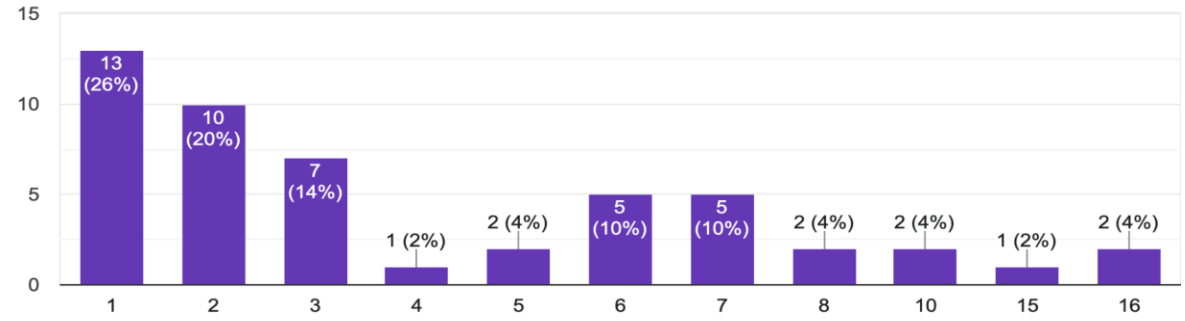
Years at company

50 responses



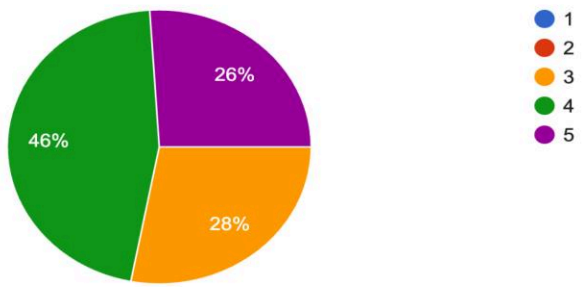
Years in current role

50 responses



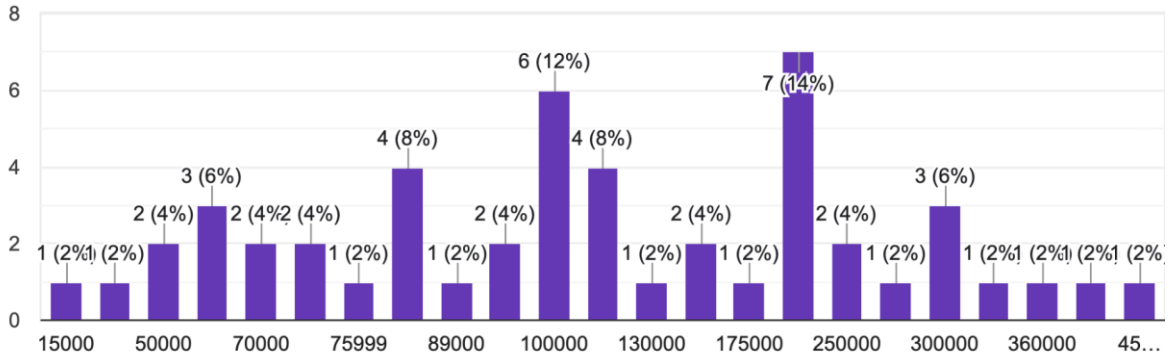
Performance rating from manager [Scale: 1-5]

50 responses



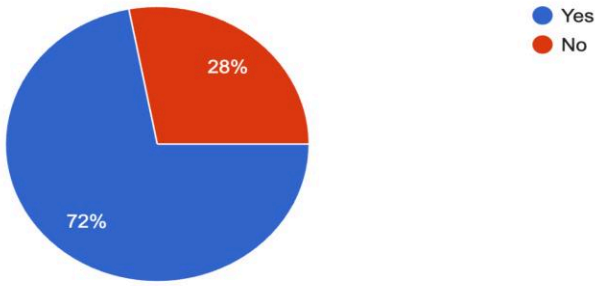
Monthly income (in INR and Full numeric value and without comma)

50 responses



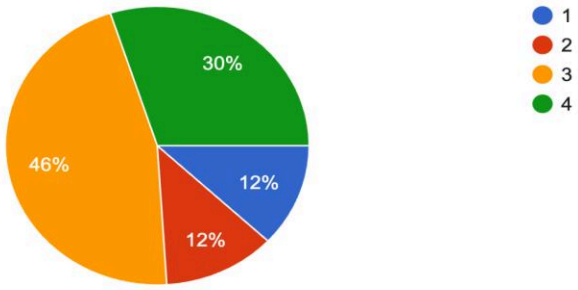
Have you done overtime?

50 responses



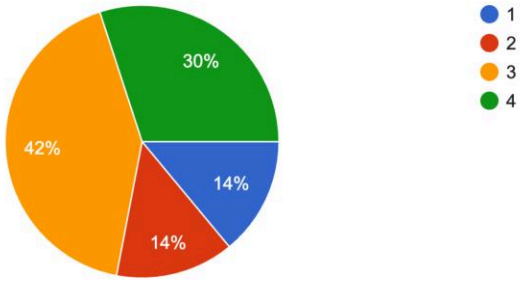
Work-Life balance [Scale: 1-4]

50 responses



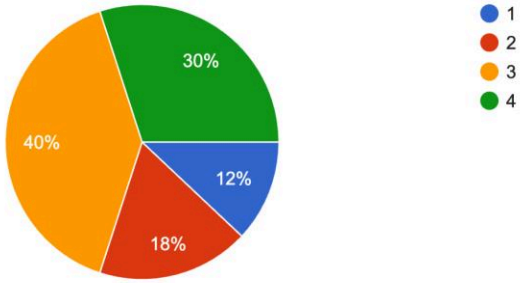
Job satisfaction [Scale: 1-4]

50 responses



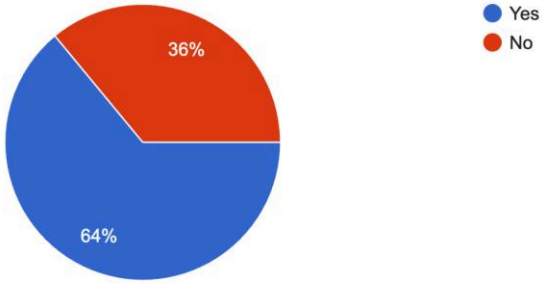
Environmental satisfaction [Scale: 1-4]

50 responses



Did you leave that company?

50 responses



Reason for leaving

50 responses

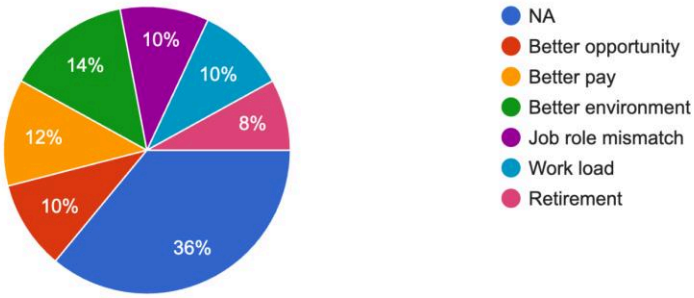
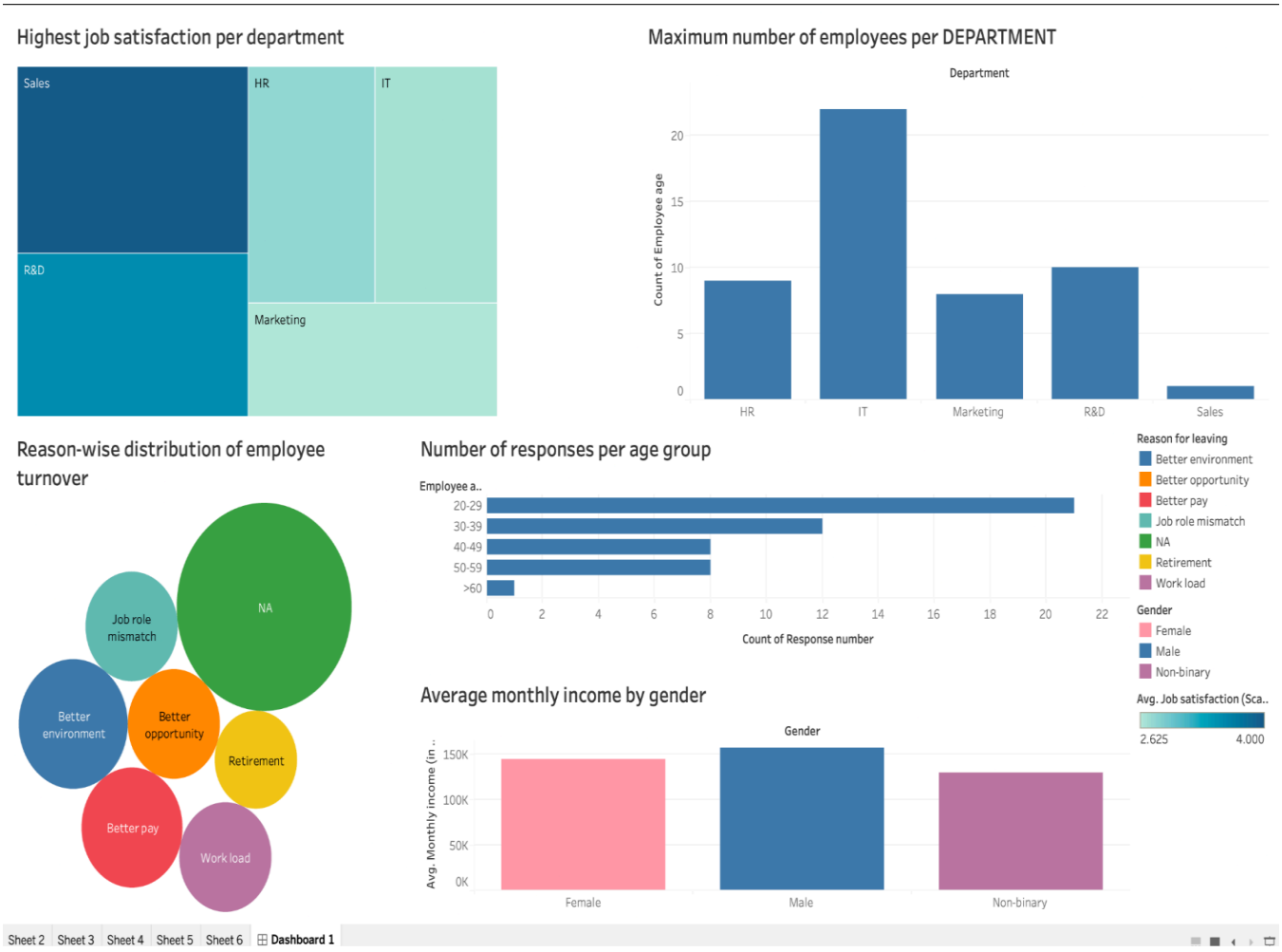


Tableau dashboard:



Data preprocessing

For " Have you done over time " COLUMN :	For " Did You leave the Company " COLUMN:	For " Gender " COLUMN :
Yes - 1	Yes - 1	Male - 1
No - 2	No - 2	Female - 2
		Non - Binary - 3
For " Marital Status " COLUMN :	For " Department " COLUMN:	For " Job roles " COLUMN :
Single - 1	HR - 1	HR Manager - 1
Married - 2	IT - 2	Software Engineer - 2
Divorced - 3	Marketing - 3	Marketing manager - 3
	Sales - 4	Sales Executive - 4
	R & D - 5	Research Scientist - 5
For " Education " COLUMN:	For " Reason For Leaving " COLUMN:	For " Years at Company " COLUMN:
High School - 1	NA - 1	0 - 6 : 1
Bachelors - 2	Better opportunity - 2	7 - 12 : 2
Masters - 3	Better pay - 3	13 - 18 : 3
PhD - 4	Better environment - 4	19 - 24 : 4
	Job role mismatch - 5	25 - 30 : 5
	Work load - 6	31 - 36 : 6
	Retirement - 7	37 - 42 : 7
For " Years in Current Role " COLUMN:	For " Monthly Income " COLUMN:	
0 - 6 : 1	0 - 60000 : 1	
7 - 12 : 2	60001 - 120000 : 2	
13 - 18 : 3	120001 - 180000 : 3	
	180001 - 240000 : 4	
	240001 - 300000 : 5	
	300001 - 360000 : 6	
	360001 - 420000 : 7	
	420001 - 480000 : 8	

Hypothesis

1. Hypothesis 1: Difference in Work-Life Balance Based on Overtime
2. Hypothesis 2: Association Between Gender and Overtime
3. Hypothesis 3: Association Between Job Satisfaction and Department
4. Hypothesis 4: Relationship Between Monthly Income and Job Satisfaction
5. Hypothesis 5: Monthly Income and Overtime Predict Job Satisfaction
6. Hypothesis 6: Difference in Work-Life Balance Based on Income Group
7. Hypothesis 7: Interaction Between Gender and Overtime on Work-Life Balance
8. Hypothesis 8: Descriptive Analysis of Frequency of Gender and Department

Results

Hypothesis 1:

"There is a significant difference in work-life balance between employees who have done overtime and those who have not."

- **Group Statistics:**
  - Two groups compared: Employees who have done overtime and those who have not.
  - The mean, standard deviation, and standard error mean for Work-Life Balance are calculated for both groups.
- **Independent Sample t-Test Table:**
  - The p-value for the test of equality of means is 0.550 (Two-Sided), which is greater than the significance level (p = 0.05).
  - Hence, **there is no significant difference** between the groups regarding Work-Life Balance.

Result:

T-Test

Group Statistics

	Have you done overtime?	N	Mean	Std. Deviation	Std. Error Mean
Work-Life balance [Scale: 1 - 4]	1	36	2.89	1.008	.168
	2	14	3.07	.829	.221

Independent Samples Test

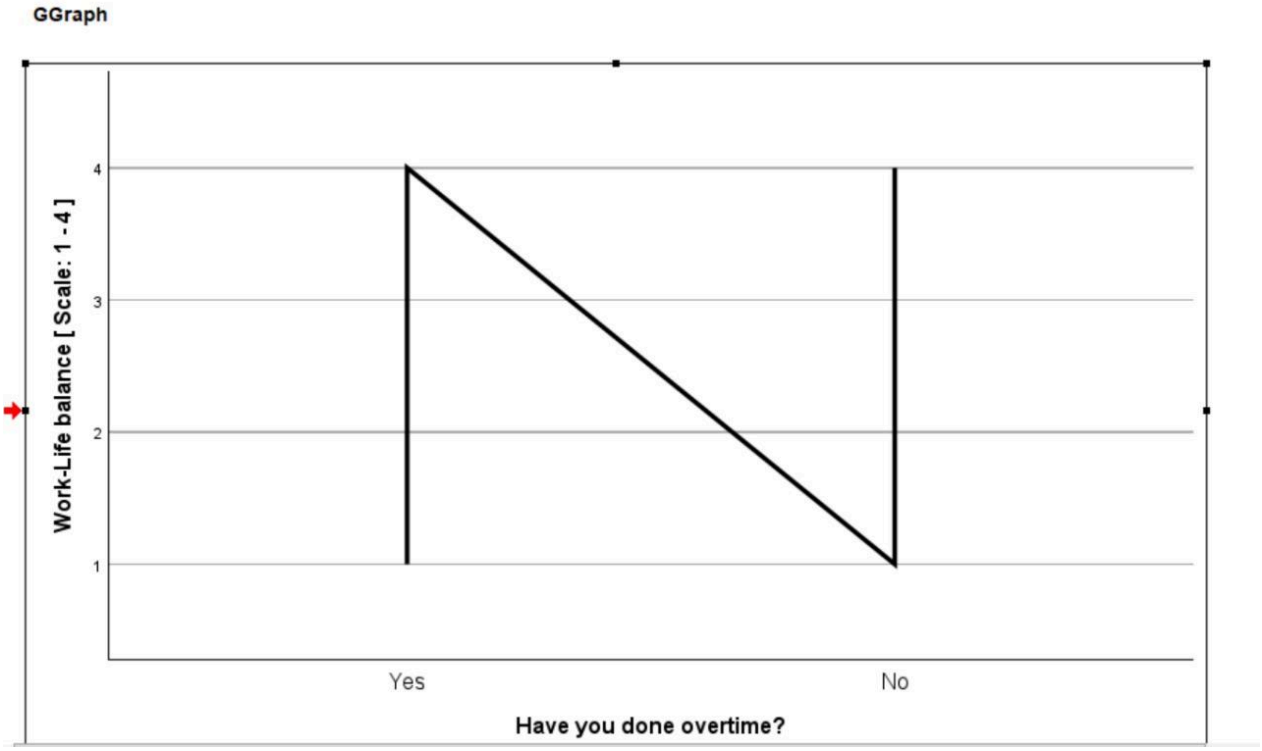
		Levene's Test for Equality of Variances		t-test for Equality of Means					
						Significance			
		F	Sig.	t	df	One-Sided p	Two-Sided p	Mean Difference	Std. Error Difference
Work-Life balance [Scale: 1 - 4]	Equal variances assumed	1.471	.231	-.602	48	.275	.550	-.183	.303
	Equal variances not assumed			-.657	28.726	.258	.517	-.183	.278

Independent Samples Effect Sizes

		Standardizer[a]	Point Estimate	95% Confidence Interval	
				Lower	Upper
Work-Life balance [Scale: 1 - 4]	Cohen's d	.963	-.190	-.807	.430
	Hedges' correction	.978	-.187	-.794	.423
	Glass's delta	.829	-.220	-.839	.407

a. The denominator used in estimating the effect sizes.
Cohen's d uses the pooled standard deviation.
Hedges' correction uses the pooled standard deviation, plus a correction factor.

Chart:



On applying an Independent Sample t-Test to measure the difference in Work-Life Balance based on whether overtime was done or not, it is concluded that t(48) = -0.602, and p = 0.550.
Therefore, the hypothesis *"There is a significant difference in work-life balance between employees who have done overtime and those who have not"* **is rejected.**

Work-Life Balance: Ordinal

Overtime: Categorical

Hypothesis 2:

" There is a significant difference in job satisfaction levels among employees across different departments.(Sales vs. R&D)"

Group Statistics:
Two groups compared: Employees from Sales and R&D departments.

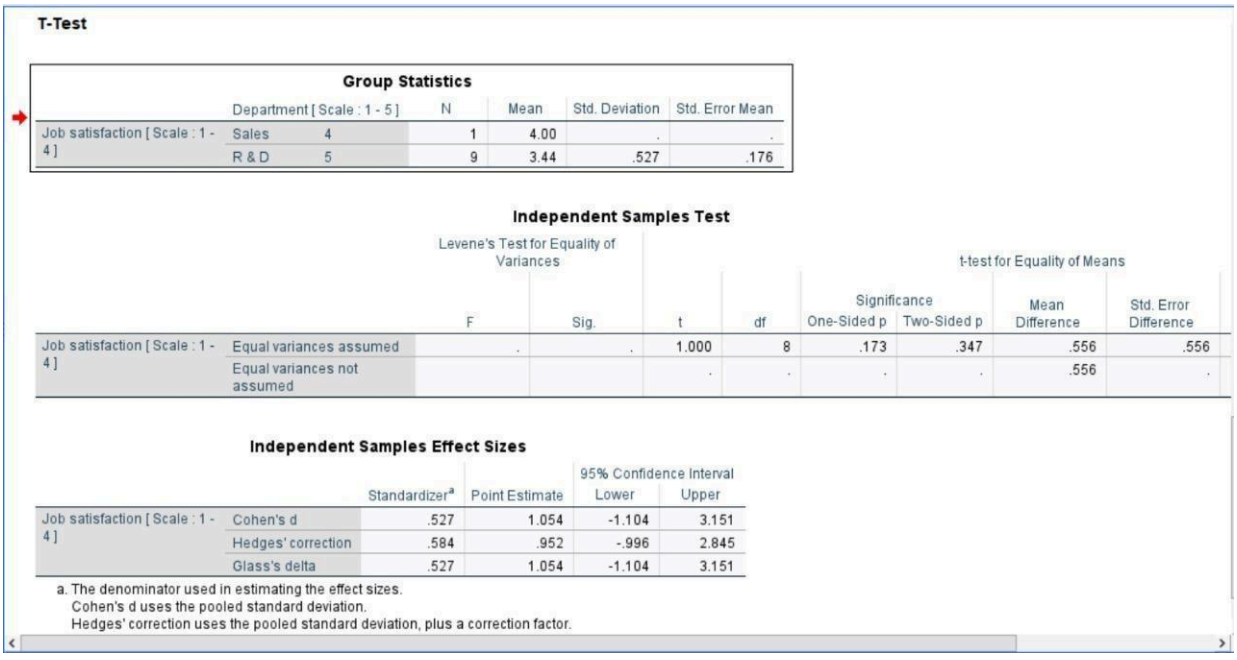
- **Sales Department:** N = 1, Mean = 4.00
- **R&D Department:** N = 9, Mean = 3.44, Standard Deviation = 0.527, Standard Error Mean = 0.176

Independent Sample t-Test Table:

- Levene's Test for Equality of Variances: F = 0.000, Sig. = 1.000
- The p-value for the test of equality of means (Two-Sided) is 0.347, which is greater than the significance level (p = 0.05).
- t(8) = 1.000, p = 0.347, Mean Difference = 0.556, Standard Error Difference = 0.556.

Hence, there is no significant difference between the groups regarding **job satisfaction**.

Result:



T-Test

Group Statistics

	Department [Scale : 1 - 5]	N	Mean	Std. Deviation	Std. Error Mean
Job satisfaction [Scale : 1 - 4]	Sales 4	1	4.00	.	.
	R & D 5	9	3.44	.527	.176

Independent Samples Test

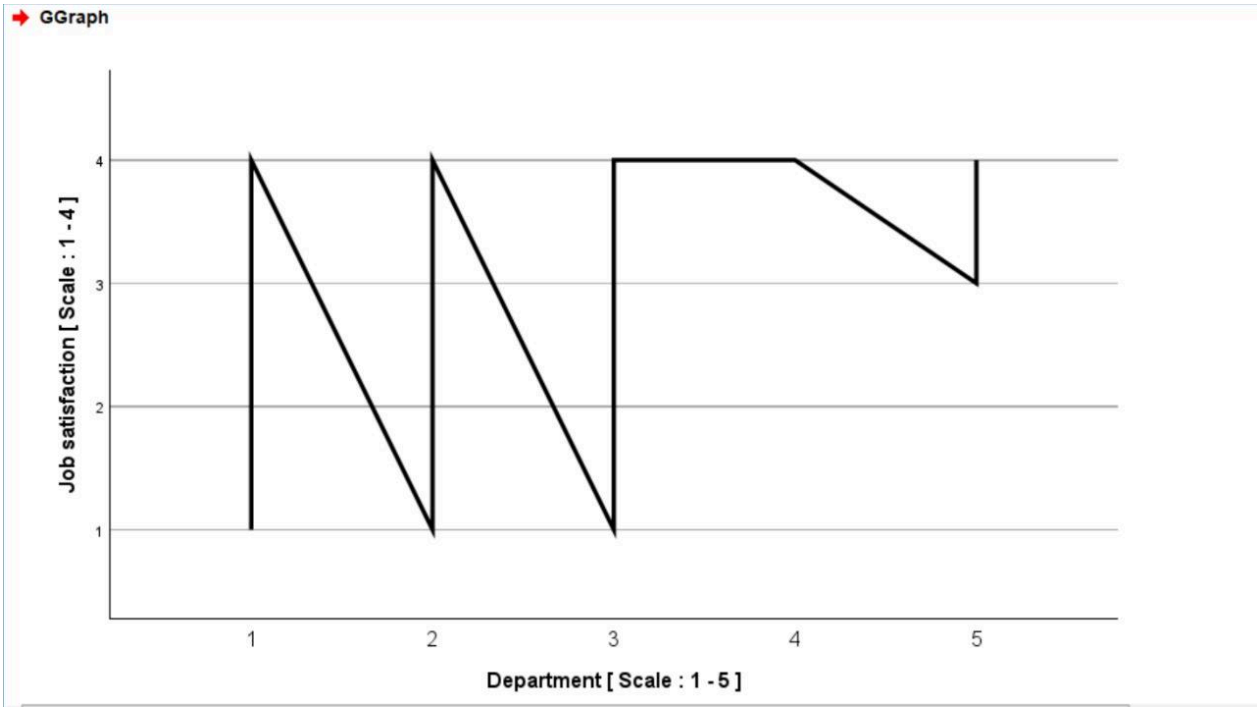
		Levene's Test for Equality of Variances		t-test for Equality of Means					
		F	Sig.	t	df	Significance One-Sided p	Significance Two-Sided p	Mean Difference	Std. Error Difference
Job satisfaction [Scale : 1 - 4]	Equal variances assumed	.	.	1.000	8	.173	.347	.556	.556
	Equal variances not assumed			.	.	.	.	.556	.

Independent Samples Effect Sizes

		Standardizer[a]	Point Estimate	95% Confidence Interval Lower	95% Confidence Interval Upper
Job satisfaction [Scale : 1 - 4]	Cohen's d	.527	1.054	-1.104	3.151
	Hedges' correction	.584	.952	-.996	2.845
	Glass's delta	.527	1.054	-1.104	3.151

a. The denominator used in estimating the effect sizes.
Cohen's d uses the pooled standard deviation.
Hedges' correction uses the pooled standard deviation, plus a correction factor.

Chart:



Effect Size (Cohen's d):

- Point Estimate = 1.054, 95% Confidence Interval [-1.104, 3.151]

Conclusion:
On applying an Independent Sample t-Test to measure the difference in **job satisfaction based on department**, it is concluded that t(8) = 1.000, p = 0.347. Therefore, the hypothesis "*There is a significant difference in job satisfaction between employees from Sales and R&D departments*" is **rejected**.

- **Job Satisfaction:** Ordinal (Scale: 1-4)
- **Department:** Categorical (Sales, R&D)

Hypothesis 3:

There is an association between gender and whether an employee has done overtime."

Group Statistics:

Three groups compared: Male, Female, and Non-Binary individuals.

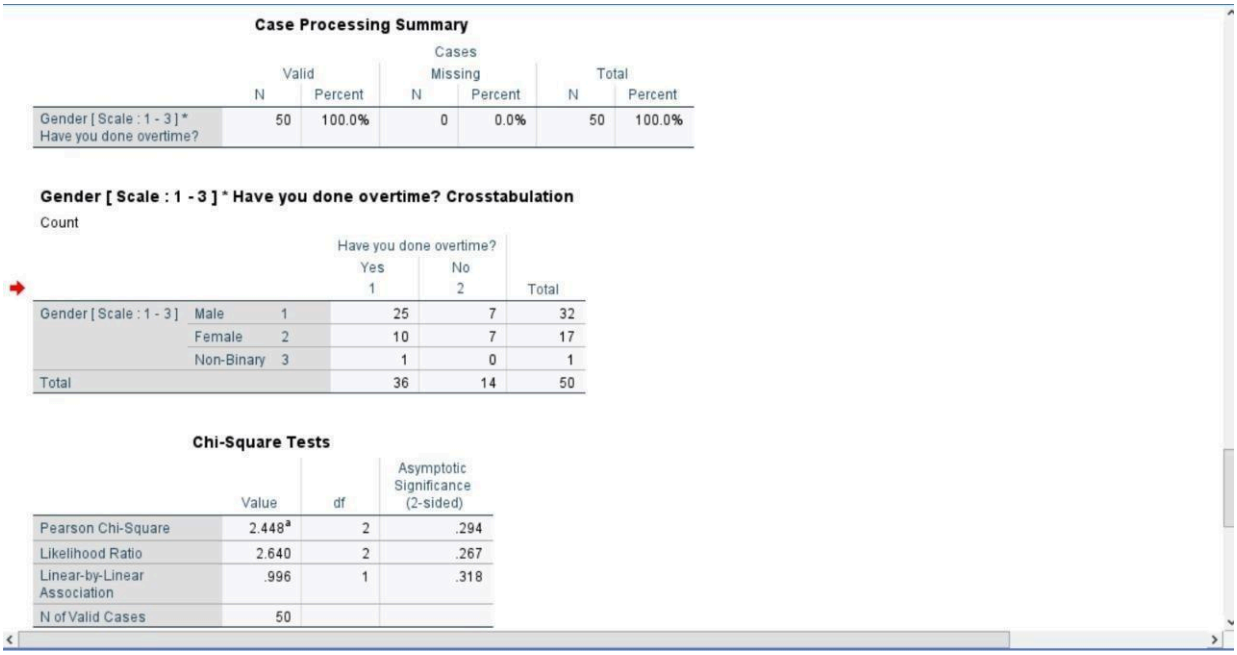
- **Male:** Yes = 25, No = 7, Total = 32
- **Female:** Yes = 10, No = 7, Total = 17
- **Non-Binary:** Yes = 1, No = 0, Total = 1

Chi-Square Test Table:

- **Pearson Chi-Square:** $\chi^2(2) = 2.448$, $p = 0.294$
- **Likelihood Ratio:** $\chi^2(2) = 2.640$, $p = 0.267$
- **Linear-by-Linear Association:** $\chi^2(1) = 0.996$, $p = 0.318$

The p-value for the Pearson Chi-Square test is 0.294, which is greater than the significance level ($p = 0.05$).

Result:



Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Gender [Scale : 1 - 3] * Have you done overtime?	50	100.0%	0	0.0%	50	100.0%

Gender [Scale : 1 - 3] * Have you done overtime? Crosstabulation

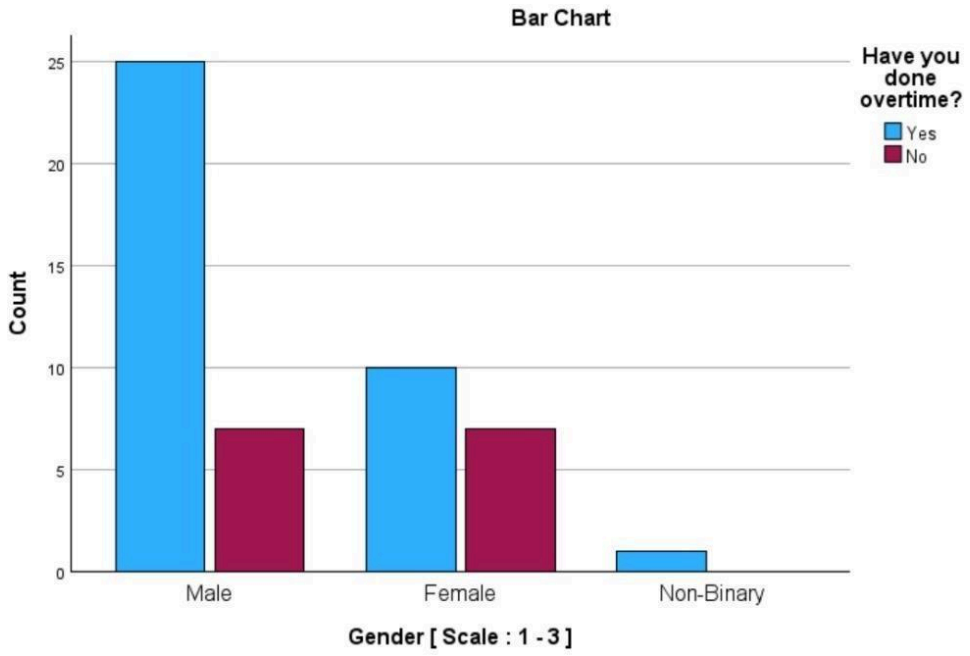
Count

			Have you done overtime? Yes 1	No 2	Total
Gender [Scale : 1 - 3]	Male	1	25	7	32
	Female	2	10	7	17
	Non-Binary	3	1	0	1
Total			36	14	50

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	2.448[a]	2	.294
Likelihood Ratio	2.640	2	.267
Linear-by-Linear Association	.996	1	.318
N of Valid Cases	50		

Chart:



Conclusion:
On applying a Chi-Square test to measure the difference in **overtime based on gender**, it is concluded that $\chi^2(2) = 2.448$, $p = 0.294$.
Therefore, the hypothesis "*There is an association between gender and whether an employee has done overtime."* is **rejected**.

- **Gender:** Categorical (Male, Female, Non-Binary)
- **Overtime:** Categorical (Yes, No)

Hypothesis 4:

" There is an association between job satisfaction and the department an employee works in."

Group Statistics:

Five departments compared: HR, IT, Marketing, Sales, and R&D.

- **HR:** Job Satisfaction 1 = 1, 2 = 3, 3 = 2, 4 = 4
- **IT:** Job Satisfaction 1 = 4, 2 = 4, 3 = 9, 4 = 5
- **Marketing:** Job Satisfaction 1 = 2, 2 = 0, 3 = 5, 4 = 1
- **Sales:** Job Satisfaction 1 = 0, 2 = 0, 3 = 5, 4 = 0
- **R&D:** Job Satisfaction 1 = 0, 2 = 0, 3 = 0, 4 = 4

Chi-Square Test Table:

- **Pearson Chi-Square:** $\chi^2(12) = 13.674$, $p = 0.322$
- **Likelihood Ratio:** $\chi^2(12) = 17.058$, $p = 0.147$
- **Linear-by-Linear Association:** $\chi^2(1) = 2.612$, $p = 0.106$

The p-value for the Pearson Chi-Square test is 0.322, which is greater than the significance level (p = 0.05).

Result:

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Job satisfaction [Scale : 1 - 4] * Department [Scale : 1 - 5]	50	100.0%	0	0.0%	50	100.0%

Job satisfaction [Scale : 1 - 4] * Department [Scale : 1 - 5] Crosstabulation

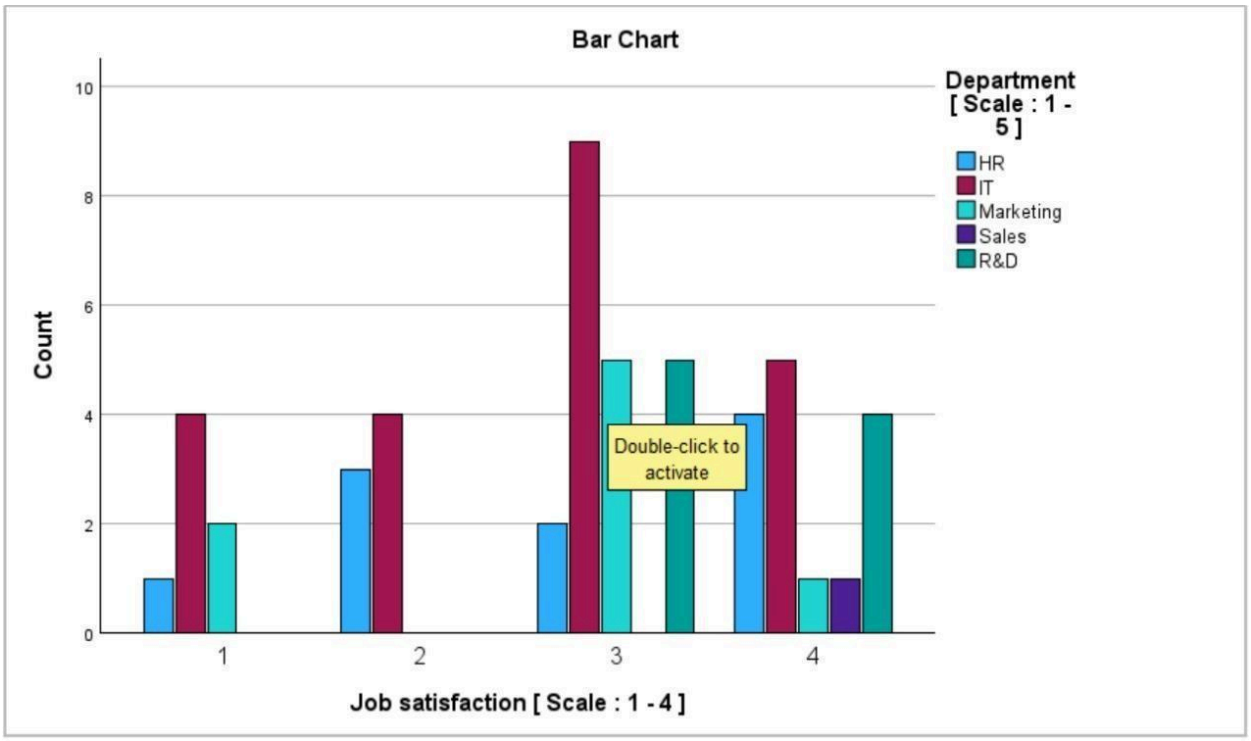
Count

		Department [Scale : 1 - 5]					
		HR 1	IT 2	Marketing 3	Sales 4	R&D 5	Total
Job satisfaction [Scale : 1 - 4]	1	1	4	2	0	0	7
	2	3	4	0	0	0	7
	3	2	9	5	0	5	21
	4	4	5	1	1	4	15
Total		10	22	8	1	9	50

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	13.674[a]	12	.322
Likelihood Ratio	17.058	12	.147
Linear-by-Linear Association	2.612	1	.106
N of Valid Cases	50		

Chart:



Conclusion:

On applying a Chi-Square test to measure the difference in **job satisfaction based on department**, it is concluded that $\chi^2(12) = 13.674$, $p = 0.322$.

Therefore, the hypothesis *" There is an association between job satisfaction and the department an employee works in"* is **rejected**.

- **Job Satisfaction:** Ordinal (Scale: 1-4)
- **Department:** Categorical (HR, IT, Marketing, Sales, R&D)

Hypothesis 5:

"*There is no significant relationship between monthly income and job satisfaction"*

Regression Analysis:

- Predictor Variable: Monthly Income (in INR and full numeric value without comma)
- Dependent Variable: Job Satisfaction (Scale: 1-4)

Model Summary:

- R: 0.222
- R^2 (R-Square): 0.049
- Adjusted R^2: 0.030
- Standard Error of the Estimate: 0.988

Result :

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.433	1	2.433	2.493	.121[b]
	Residual	46.847	48	.976		
	Total	49.280	49			

a. Dependent Variable: Job satisfaction [Scale : 1 - 4]

b. Predictors: (Constant), Monthly income (in INR and Full numeric value and without comma) [Scale : 1 - 8]

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	2.496	.280		8.905	<.001
	Monthly income (in INR and Full numeric value and without comma) [Scale : 1 - 8]	.131	.083	.222	1.579	.121

a. Dependent Variable: Job satisfaction [Scale : 1 - 4]

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Monthly income (in INR and Full numeric value and without comma) [Scale : 1 - 8][b]	.	Enter

a. Dependent Variable: Job satisfaction [Scale : 1 - 4]

b. All requested variables entered.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.222[a]	.049	.030	.988

a. Predictors: (Constant), Monthly income (in INR and Full numeric value and without comma) [Scale : 1 - 8]

b. Dependent Variable: Job satisfaction [Scale : 1 - 4]

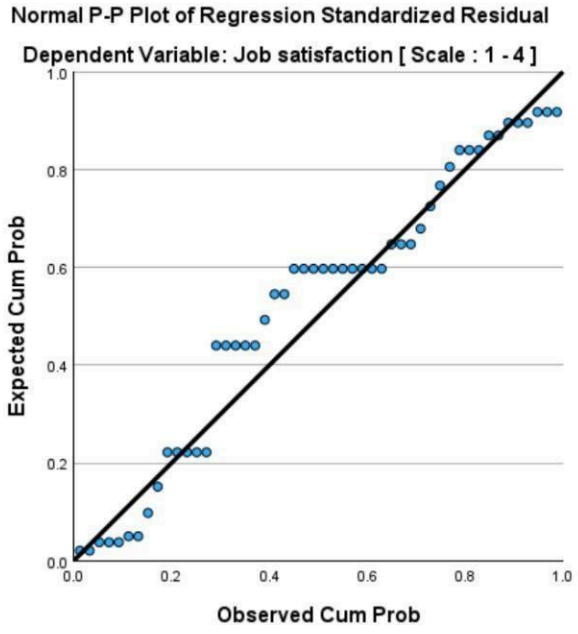
Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.63	3.54	2.88	.223	50
Residual	-2.018	1.373	.000	.978	50
Std. Predicted Value	-1.136	2.964	.000	1.000	50
Std. Residual	-2.043	1.390	.000	.990	50

a. Dependent Variable: Job satisfaction [Scale : 1 - 4]

Chart:

Charts



Conclusion:

- The R^2 value of 0.049 indicates that only 4.9% of the variance in job satisfaction can be explained by monthly income.
- The Adjusted R^2 is slightly lower at 0.030, which adjusts for the number of predictors in the model.
- The correlation ($R = 0.222$) suggests a weak positive relationship between monthly income and job satisfaction.
- Based on the low R^2, the model does explain a significant portion of the variability in job satisfaction. Monthly income alone is not a strong predictor of job satisfaction in this sample.

The hypothesis "There is no significant relationship between monthly income and job satisfaction." would be accepted.

Hypothesis 6:

"Monthly income and overtime significantly predict job satisfaction."

Regression Analysis:

- Predictor Variables:
    1. Have you done overtime? (Yes/No)
    2. Monthly income (in INR and full numeric value without comma)
- Dependent Variable: Job satisfaction (Scale: 1-4)

Model Summary:

- R: 0.273
- R^2: 0.074
- Adjusted R^2: 0.035
- Standard Error of the Estimate: 0.985

Result :

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Have you done overtime?, Monthly income (in INR and Full numeric value and without comma) [Scale : 1 - 8][b]	.	Enter

a. Dependent Variable: Job satisfaction [Scale : 1 - 4]

b. All requested variables entered.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.273[a]	.074	.035	.985

a. Predictors: (Constant), Have you done overtime?, Monthly income (in INR and Full numeric value and without comma) [Scale : 1 - 8]

b. Dependent Variable: Job satisfaction [Scale : 1 - 4]

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.670	2	1.835	1.891	.162[b]
	Residual	45.610	47	.970		
	Total	49.280	49			

a. Dependent Variable: Job satisfaction [Scale : 1 - 4]

b. Predictors: (Constant), Have you done overtime?, Monthly income (in INR and Full numeric value and without comma) [Scale : 1 - 8]

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.997	.523		3.816	<.001
	Monthly income (in INR and Full numeric value and without comma) [Scale : 1 - 8]	.146	.084	.248	1.746	.087
	Have you done overtime?	.355	.314	.161	1.129	.265

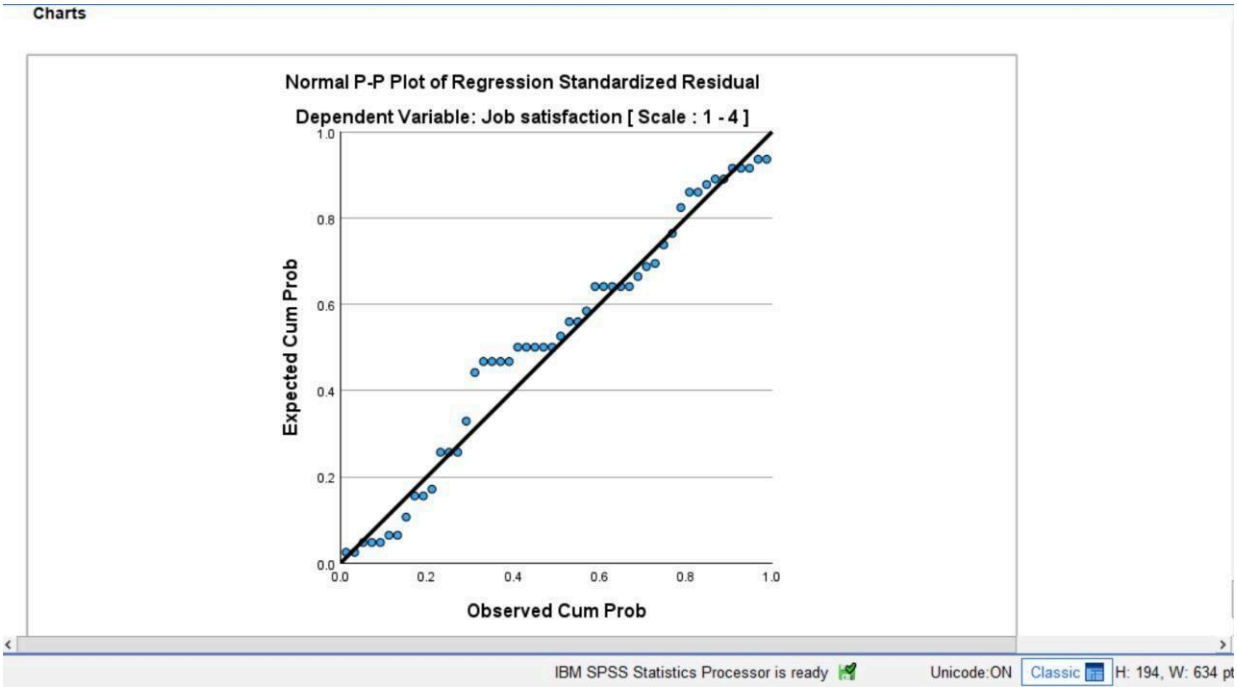
a. Dependent Variable: Job satisfaction [Scale : 1 - 4]

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.50	3.58	2.88	.274	50
Residual	-1.935	1.502	.000	.965	50
Std. Predicted Value	-1.397	2.565	.000	1.000	50
Std. Residual	-1.964	1.525	.000	.979	50

a. Dependent Variable: Job satisfaction [Scale : 1 - 4]

Chart:



Conclusion:

- The R^2 value of 0.074 indicates that 7.4% of the variance in job satisfaction is explained by the combination of overtime and monthly income.
- The Adjusted R^2 is 0.035, which shows a slight decrease when accounting for the number of predictors, indicating that these variables do not significantly improve the prediction of job satisfaction.
- The correlation coefficient (R = 0.273) suggests a weak positive relationship between the predictors (overtime and monthly income) and job satisfaction.

The hypothesis " *Monthly income and overtime significantly predict job satisfaction* " would be accepted based on the results of the regression analysis.

Hypothesis 7:

"There is no significant difference in work-life balance among employees in different income groups."

Source	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7.380	7	1.054	1.183	0.333
Within Groups	37.440	42	0.891		
Total	44.820	49			

- F-value = 1.183
- p-value (Sig.) = 0.333

ANOVA Effect Sizes:

- Eta-squared: 0.165 (95% CI: 0.000 - 0.247)
- Epsilon-squared: 0.025 (95% CI: -0.167 - 0.122)
- Omega-squared (Fixed-effect): 0.025 (95% CI: -0.163 - 0.119)
- Omega-squared (Random-effect): 0.004 (95% CI: -0.020 - 0.019)

Result :

Oneway

ANOVA

Work-Life balance [Scale: 1 - 4]

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7.380	7	1.054	1.183	.333
Within Groups	37.440	42	.891		
Total	44.820	49			

ANOVA Effect Sizes[a,b]

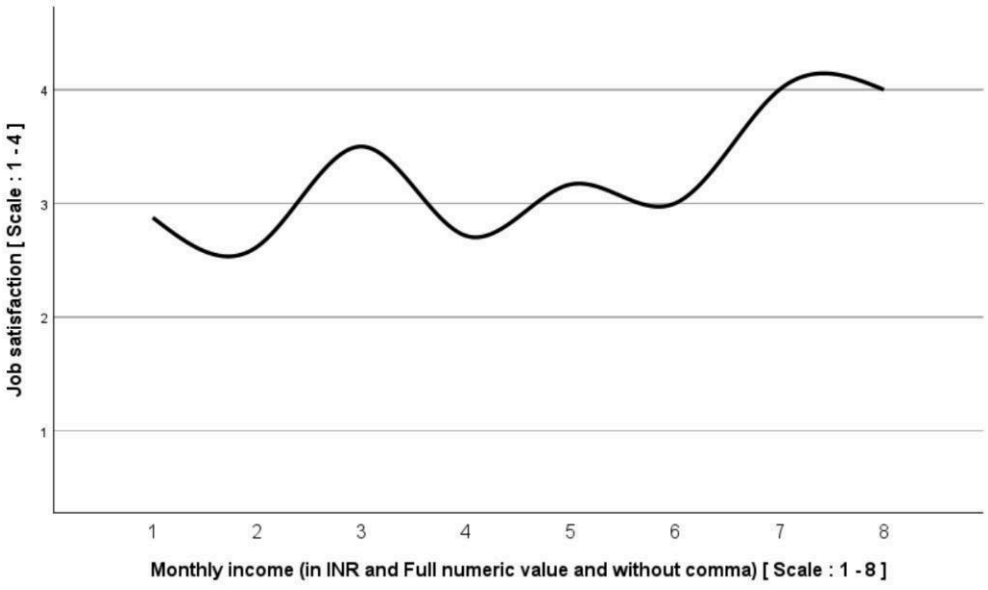
		Point Estimate	95% Confidence Interval Lower	Upper
Work-Life balance [Scale: 1 - 4]	Eta-squared	.165	.000	.247
	Epsilon-squared	.025	-.167	.122
	Omega-squared Fixed-effect	.025	-.163	.119
	Omega-squared Random-effect	.004	-.020	.019

a. Eta-squared and Epsilon-squared are estimated based on the fixed-effect model.

b. Negative but less biased estimates are retained, not rounded to zero.

Chart:

GGraph



Conclusion:

- The p-value of 0.333 is greater than the significance level (typically set at 0.05), indicating that there is no statistically significant difference in work-life balance across the groups.
- The F-value of 1.183 is relatively small, which supports the conclusion that the variation between groups is not large enough to be considered significant.
- The Eta-squared value of 0.165 suggests a small effect size, indicating that group membership explains only about 16.5% of the variance in work-life balance. However, this is still not statistically significant.

Thus, the hypothesis that " *There is no significant difference in work-life balance among employees in different income groups* " would be accepted based on this ANOVA test.

Hypothesis 8: (Not to be tested)

" Descriptive Analysis of Frequency of Gender and Department"

1. Gender Frequency Analysis:

- Male: 64% (32 employees)
- Female: 34% (17 employees)
- Non-Binary: 2% (1 employee)

The cumulative percentage shows that 64% are male, 98% are either male or female, and 100% includes all gender categories. This table offers insight into the gender distribution within the dataset, with males being the predominant group.

2. Department Frequency Analysis:

- HR: 20% (10 employees)
- IT: 44% (22 employees)
- Marketing: 16% (8 employees)
- Sales: 2% (1 employee)
- R&D: 18% (9 employees)

From the department analysis, IT is the largest department (44%), followed by HR and R&D. Sales is the smallest department, with only 2% of employees.

Frequencies

Statistics

		Gender [Scale : 1 - 3]	Department [Scale : 1 - 5]
N	Valid	50	50
	Missing	0	0

Frequency Table

Gender [Scale : 1 - 3]

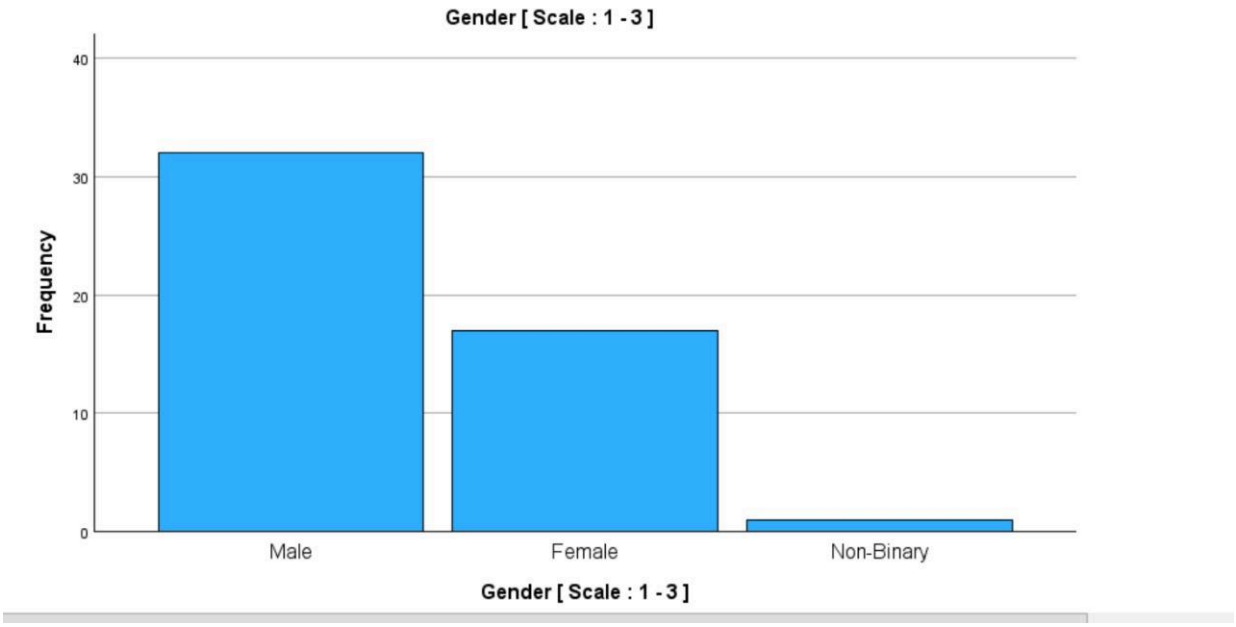
			Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	1	32	64.0	64.0	64.0
	Female	2	17	34.0	34.0	98.0
	Non-Binary	3	1	2.0	2.0	100.0
	Total		50	100.0	100.0	

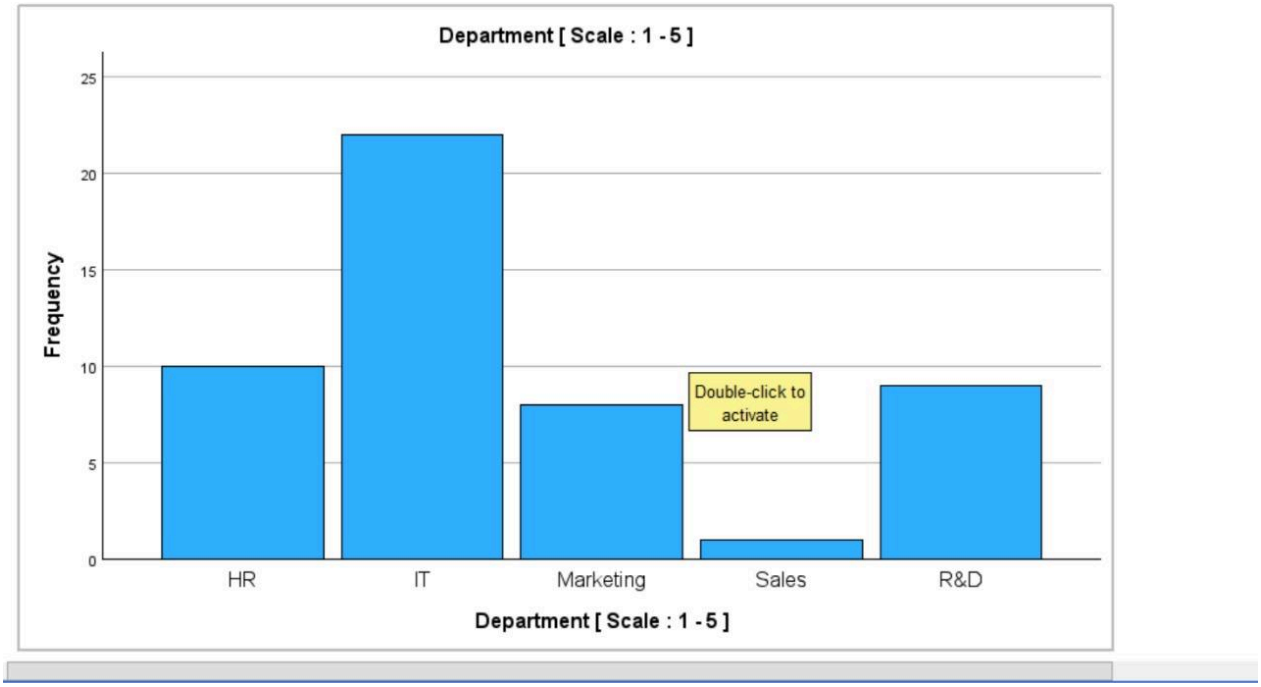
Department [Scale : 1 - 5]

			Frequency	Percent	Valid Percent	Cumulative Percent
Valid	HR	1	10	20.0	20.0	20.0
	IT	2	22	44.0	44.0	64.0
	Marketing	3	8	16.0	16.0	80.0
	Sales	4	1	2.0	2.0	82.0
	R&D	5	9	18.0	18.0	100.0
	Total		50	100.0	100.0	

Chart:

Bar Chart





Explanation:

These descriptive statistics provide a summary of the distribution of employees by gender and department. While males dominate in gender frequency, the IT department employs the most individuals.

No Hypothesis or Statistical Test:

Since no hypothesis testing is involved in descriptive frequency analysis, we are not accepting or rejecting any hypothesis here. This step is purely for summarizing and describing the data, which serves as a preliminary step before any further statistical analysis like chi-square tests or t-tests.

Final Result

Hypothesis number	Result
1	Rejected
2	Rejected
3	Rejected
4	Rejected
5	Accepted
6	Accepted
7	Accepted

Appendix

Questionnaire

Survey for analysing Employee Turnover and Retention

Please fill-up this form for the survey of employee turnover and retention.

Employee age *

Short answer text

Gender *

- Male
- Female
- Non-binary

Marital status *

- ( ) Single
- ( ) Married
- ( ) Divorced

Department *

- ( ) HR
- ( ) IT
- ( ) R&D
- ( ) Marketing
- ( ) Sales

Job roles *

- Sales Executive
- Software Engineer
- HR Manager
- Research Scientist
- Marketing manager

Education *

- High School
- Bachelors
- Masters
- PhD

Job level [Scale: 1-7] *

- 1
- 2
- 3
- 4
- 5
- 6
- 7

Years at company *

Short answer text

Years in current role *

Short answer text

Performance rating from manager [Scale: 1-5] *

- ○ 1
- ○ 2
- ○ 3
- ○ 4
- ○ 5

Monthly income (in INR and Full numeric value and without comma) *

Short answer text

Have you done overtime? *

- ○ Yes
- ○ No

Work-Life balance [Scale: 1-4] *

- 1
- 2
- 3
- 4

Job satisfaction [Scale: 1-4] *

- 1
- 2
- 3
- 4

Environmental satisfaction [Scale: 1-4] *

- 1
- 2
- 3
- 4

Did you leave that company? *

- Yes
- No

Reason for leaving *

- [ ] NA
- [ ] Better opportunity
- [ ] Better pay
- [ ] Better environment
- [ ] Job role mismatch
- [ ] Work load
- [ ] Retirement
- [ ] Other...

Conclusion

The present study delves into the key factors influencing employee turnover and retention, with a particular focus on the relationships between monthly income, job satisfaction, and work-life balance. The findings reveal important insights into how these factors interact within the workplace.

Firstly, there is no strong relationship between monthly income and job satisfaction, indicating that while salary may influence an employee's overall experience, it is not the sole or most significant factor in determining their satisfaction with the job. This suggests that organizations need to look beyond financial incentives when aiming to enhance employee satisfaction.

However, monthly income and overtime are significant predictors of job satisfaction. Employees who earn more and engage in overtime show different patterns of job satisfaction, highlighting the need for balanced compensation and workload structures. It suggests that while income alone may not strongly correlate with satisfaction, the combination of income and work conditions, such as overtime, plays a crucial role.

Additionally, the analysis shows no significant difference in work-life balance among employees in different income groups, underscoring that work-life balance concerns cut across income levels. This finding emphasizes the importance of maintaining equitable work-life balance initiatives for all employees, regardless of income.

Overall, this study points to the need for a multifaceted approach to improving job satisfaction and retention. While financial incentives and overtime management are critical, organizations must also consider broader factors such as workplace culture, mental well-being support, and equitable work-life balance initiatives to retain a committed and satisfied workforce.